

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
STATESVILLE DIVISION
CIVIL ACTION NO. 5:19-CV-00020-KDB-DSC**

KLUHSMAN MACHINE, INC.,

Plaintiffs,

v.

**DINO PAOLI SRL
UNITED RACE PARTS LLC,**

Defendants.

CLAIM CONSTRUCTION ORDER

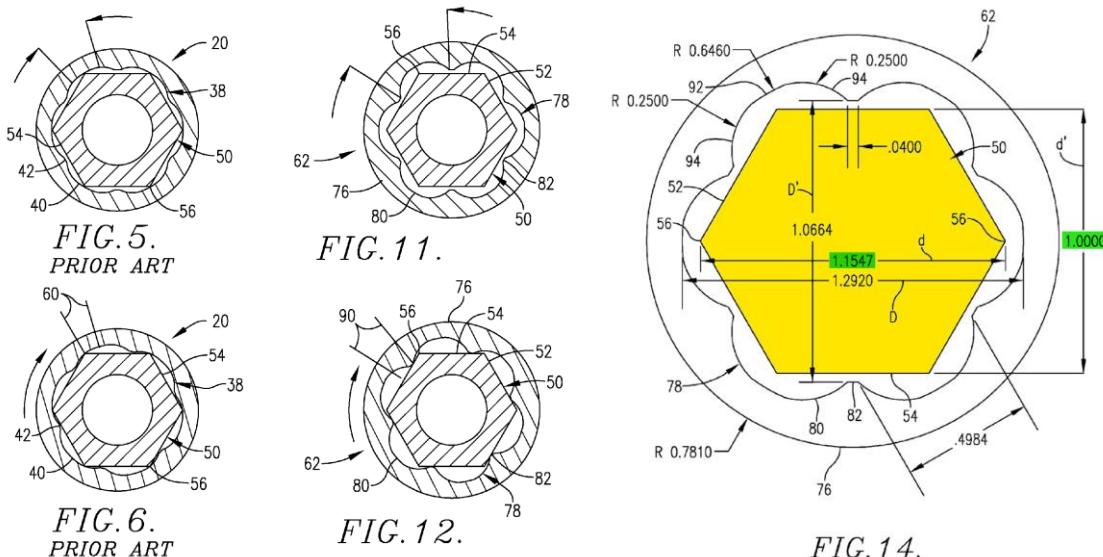
In this action, Plaintiff Kluhsman Machine, Inc. (“KM”) asserts patent infringement claims against Defendants Dino Paoli SRL (“DP”) and United Race Parts LLC (“URP”), related to a patent for a lug nut socket designed to be used by automotive racing teams. The parties disagree on the construction of several claim terms of the patent at issue, U.S. Patent No. 8,899,134 (“the ‘134 Patent”), and also disagree on the definition of who should be considered a “person having ordinary skill in the art.” The parties have fully briefed their respective proposed constructions and the Court held a “Markman” claim construction hearing on July 21, 2020.

Having carefully considered the parties’ arguments, the patent at issue and other relevant intrinsic and extrinsic evidence of record, the Court construes the disputed terms of the ‘134 Patent and determines who should be considered a person of ordinary skill in the art of those patents as follows:

I. THE '134 PATENT

The '134 patent states that the invention "... is broadly concerned with high- efficiency wheel lug nut sockets for use in racing pits in order to materially decrease pit service times for the removal and attachment of racing car wheels." ('134 patent at 1:8-11.) Sockets are widely known tools that are used to turn threaded fasteners such as lug nuts, for securing objects to automobiles and in the context of automotive racing are used in connection with powered impact wrenches to remove and attach wheels as quickly as possible.

Specifically, the "134 Patent is directed towards sockets for use with "conventional hexagonal wheel lug nuts." ('134 patent at 3:36-37.) The invention in the '134 patent is described by its dimensions and also in comparison to admitted prior art. (*See, e.g.*, '134 Patent at Fig. 5, 6, 11, 12). The "most preferred dimensions" for an embodiment of the alleged invention are provided in Fig. 14.



As shown in the patent drawings and described in the patent, the principal improvement alleged over prior art is that the invention provides "full clearance" between the inner operating surface of the socket and the lug nut outer surface to permit the socket to more easily fit over the

lug nut and to engage and turn the lug nut more rapidly. The patent does not, however, more specifically define “full clearance” relative to the clearance provided for in the prior art socket, the dimensions of which are not specified (but can be seen in the prior art drawings as fitting very closely over the lug nut).

II. A “PERSON OF ORDINARY SKILL IN THE ART”

“A court construing a patent claim seeks to accord the claim the meaning it would have to a person of ordinary skill in the art at the time of the invention.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). The Federal Circuit has held that a person of skill in the art is “a hypothetical person who is presumed to know the relevant prior art.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). In determining the level of ordinary skill, district courts may consider the “type of problems encountered in the art, prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1376 (Fed. Cir. 2012) (quoting *Custom Accessories*, 807 F.2d at 962).

The parties differ in their descriptions of who should be considered a person of ordinary skill in the art (“POSITA”). KMI contends that for the “134 Patent a POSITA would have:

at least two years of experience designing and machining lug nuts and lug nut sockets, or similar automotive parts.

Defendants propose that a POSITA would be:

a person with a bachelor’s degree in engineering, mechanical engineering, manufacturing, or similar, and at least two years of work in an engineering field, such as in mechanical engineering, industrial engineering, manufacturing, or similar. Additional education can substitute for less work experience and additional work experience can substitute for less education.

Thus, the primary differences in the parties' proposals are KMI's emphasis on practical experience specifically related to designing and machining lug nuts and lug nut sockets and Defendants' emphasis on education in addition to or as a substitute for less specific work experience. As noted above, in determining who is a POSITA the Court must consider a range of factors which focus on real-world familiarity with the subject matter of the patent rather than only relevant educational attainments. A POSITA looking to practice the '134 Patent – i.e. designing and/or manufacturing a lug nut socket for lug nuts being used in racing car wheels – would need to have manufacturing knowledge and experience in that area beyond simply an educational degree. So, while the Defendants' proposed definition of a POSITA includes work experience in addition to an educational degree, the lack of specificity in the proposed work experience might allow someone who does not have the necessary practical experience with designing and machining similar automotive parts to be considered a POSITA.

Therefore, the Court finds that a "person of ordinary skill in the art" for the purposes of this action is defined as follows:

A person with at least two years of experience designing and machining lug nuts and lug nut sockets (or similar automotive parts) or a person with a bachelor's degree in engineering, mechanical engineering, manufacturing, or similar, and at least one year of work experience in designing and machining automotive parts.

III. LEGAL STANDARDS GOVERNING CLAIM CONSTRUCTION

Analysis of patent infringement involves two steps. "The first step is determining the meaning and scope of the patent claims asserted to be infringed." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc). "The second step is comparing the properly construed claims to the device accused of infringing." *Id.* It is the first step, "commonly known as claim construction or interpretation," that is at issue at the present stage of this case. *Id.*

It is the court's role in claim construction to "analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and consistent scope of the patent owner's rights to be given legal effect." *Markman*, 52 F.3d at 979. "It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotations omitted). Thus, the goal of claim construction is to determine the meaning of the claims. *See id; O2 Micro Int'l Ltd. V. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008).

"To ascertain the meaning of claims," the court must consider primarily the "intrinsic record," comprised of "the claims, the specification, and the prosecution history." *Markman*, 52 F.3d at 979; *Phillips*, 415 F.3d at 1313. Prosecution history is the "public record" of proceedings in the Patent and Trademark Office, which may include statements by the inventor, or on his behalf, while a patent application is pending approval. Secondarily, the court may consider "extrinsic evidence" in the form of expert testimony, technical information and dictionaries. *Id.*

To start, "the claim construction analysis must begin and remain centered on the claim language itself." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). This Court must "look to the words themselves ... to define the scope of the patented invention." *Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The "words of a claim are generally given their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312 (quotations omitted). However, a claim term's "ordinary and customary" meaning is not necessarily the same as its "common" public meaning. Rather, the "ordinary and customary" meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of invention, i.e., as of the effective filing date of the patent

application.” *Id.* at 1313. A person of ordinary skill in the art “is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field.” *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). Where the ordinary meaning of a claim phrase or term is not apparent, a court may then act as would a person of ordinary skill in the art by looking to “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Innova/Pure Water*, 381 F.3d at 1116.

When engaging in claim construction, courts must follow a hierarchy of evidence, with the first being claim language, the second consisting of other intrinsic evidence (i.e., the specification, the remainder of the patent, and the prosecution history), and the third being extrinsic evidence (i.e., evidence that is external to the patent and prosecution history, such as expert testimony or treatises). *Advanced Cardiovascular Sys. v. Medtronic*, 265 F.3d 1294, 1304 (Fed. Cir. 2001). This hierarchy of evidence does not, however, suggest that courts must consider and weigh all forms of evidence. Instead, if the intrinsic evidence provides a court with sufficient evidence to inform the claim construction, it need not descend and consider extrinsic evidence.

When a court considers intrinsic evidence, the specification is “the single best guide to the meaning of a disputed term” and most often “dispositive.” *Phillips*, 415 F.3d at 1315. Courts must be cautious, however, to avoid limiting the scope of the claims by importing limitations of the specification into the scope of the claims. There is “a fine line between reading a claim in light of the specification and reading a limitation into the claim from the specification.” *Id.* at 1323. Where a court construes “the claims based on the written description, the district court has committed one of the cardinal sins of patent law—reading a limitation from the written description into the

claims.” *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001). Rather, “[c]laims must be read in view of the specification, of which they are a part.” *Id.* (citation and quotations omitted). Notably, the patentee need not “describe in the specification every conceivable and possible future embodiment of his invention.” *CCS Fitness v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (internal citations omitted).

Also, “the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.* at 1317. Nevertheless, the court cannot “rely on the prosecution history to construe the meaning of the claim to be narrower than it would otherwise be unless a patentee limited or surrendered claim scope through a clear and unmistakable disavowal.” *3M Innovative Properties v. Tredegar Corp.*, 725 F.3d 1315, 1322 (Fed. Cir. 2013).

IV. DISPUTED CLAIM CONSTRUCTIONS

Claim terms that at least one party contends require construction are set out below. The parties agree that all other terms do not require construction and the jury will be informed that those terms have their plain and ordinary meaning.

TERM 1: “the distance d” (Claims 1 and 3)

KMI’s PROPOSED CONSTRUCTION – 1” (one inch)

DEFENDANTS’ PROPOSED CONSTRUCTION – No construction needed

The ’134 patent includes in claims 1 and 3 a reference to a “distance d” as follows:

- the distance D' between the opposed apex surfaces being at least about 0.04 inches greater than the distance d' between opposed wrench flat surfaces (Claim 1)
- The wheel lug nut socket of Claim 1, the distance D' being from about 0.05 - 0.07 inches greater than the distance d' (Claim 3)

In the specification of the patent, the distance d' is described, in reference to Fig. 14 (see above) as “the opposed flat surfaces **54** of the nut **50** are spaced apart a distance d' .” (‘134 Patent at 4:64-65). Therefore, in the absence of further construction, the “distance d' ” is the distance between the opposed flat surfaces of the lug nut being engaged by the lug nut socket.

KMI contends that the “distance d' ” should be more particularly construed as 1” based on the “conventional hexagonal wheel lug nut” that is shown in Fig. 14 (as well as other drawings in the ‘134 Patent). In support of its position, KMI argues that the only lug nut described and shown in the ‘134 Patent is a conventional 1” hexagonal lug nut (*See* ‘134 Patent at Figs. 11, 14 and Col. 4:30-33, 4:59-65) and the specification teaches that the socket is designed “to receive [the] conventional hexagonal wheel lug nut 50” shown in the figures, which is the conventional 1” hexagonal lug nut (*Id.* at 3:35-49 and 4:30-33). Also, KMI asserts that NASCAR and “most” other racing circuits mandate the use of conventional 1” hexagonal lug nuts. (*See* Doc. No. 48, Kluhsman Decl. at 9).

Applying the first rule of claim construction discussed above – that claim construction analysis must begin and remain centered on the claim language itself – the Court finds that the language of the claims of the ‘134 Patent do not limit the invention to only 1” lug nuts or even “conventional” lug nuts as referenced in the description of the “preferred embodiment” of the invention. Rather, the language of Claim 1 refers only to a “hexagonal lug nut” or a “lug nut.” As noted, it would be a “cardinal sin” of patent law to construe the claims based on the written description and read “a limitation from the written description into the claims.” *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d at 1340. Thus, although a 1” lug nut may be the most typical size of lug nut used in racing wheels, the *claims* of the ‘134 Patent claims are not limited to any particular size. Indeed, even the declaration of the inventor Mr. Kluhsman

makes clear by implication that not all racing circuits use 1" lug nuts (noting only that "most" circuits use the 1" lug nut). *See also* Doc. No. 53-1 (Rebuttal Declaration of Timothy Hicks) at ¶¶ 25 -28.

Having determined that the claims of the patent are not limited to any particular size lug nut, it would be error to specify the dimension of "distance d" as any specific distance. Therefore, the Court construes the claim term "distance d" to mean "the distance between the opposed flat surfaces of the lug nut being engaged by the lug nut socket," as specifically set forth in the '134 Patent.

TERM 2: "the distance d"

KMI's PROPOSED CONSTRUCTION – 1.1547" (1.1547 inches)

DEFENDANTS' PROPOSED CONSTRUCTION – No construction needed

The '134 patent includes in claims 1 and 2 a reference to a "distance d" as follows:

- the distance D between the centers of opposed concave surfaces being at least about 0.1 inches longer than the distance d between opposed apices of said lug nut (Claim 1)
- The wheel lug nut socket of Claim 1, the distance D being from about 0.12-0.15 inches longer than the distance d (Claim 2)

In the specification of the patent, the distance d is described, in reference to Fig. 14 as "the opposed nut apices 56 are spaced apart a distance d." ('134 Patent at 4:63-64). Therefore, in the absence of further construction, the "distance d" is the distance between the opposed nut apices of the lug nut being engaged by the lug nut socket.

Similar to the term "distance d," KMI proposes that the "distance d" should be more particularly defined as "1.1547" based on the "conventional hexagonal wheel lug nut" that is shown in Fig. 14 (as well as other drawings in the '134 Patent). However, for the reasons discussed above, the Court finds that the '134 Patent does not claim any specific size of

hexagonal nut and it would therefore be wrong to specify the distance d with respect to a “conventional” 1” lug nut. Accordingly, the Court will construe the term “distance d ” as the “the distance between the opposed nut apices of the lug nut being engaged by the lug nut socket” as set forth in the ‘134 Patent.

TERM 3: “Substantially Flattened”

KMI’s PROPOSED CONSTRUCTION – **Plain and ordinary meaning or “nearly, approximately or almost flattened.”**

DEFENDANTS’ PROPOSED CONSTRUCTION – **Indefinite or “Flat”**

The term “substantially flattened” is contained in Claim 1 of the ‘134 Patent as follows:

said inner operating surface comprising six side-by-side concave surfaces with *a substantially flattened apex surface* between each pair of the side-by-side concave surfaces

These “apex surfaces” are noted as **82** in the drawing below (Fig. 14).

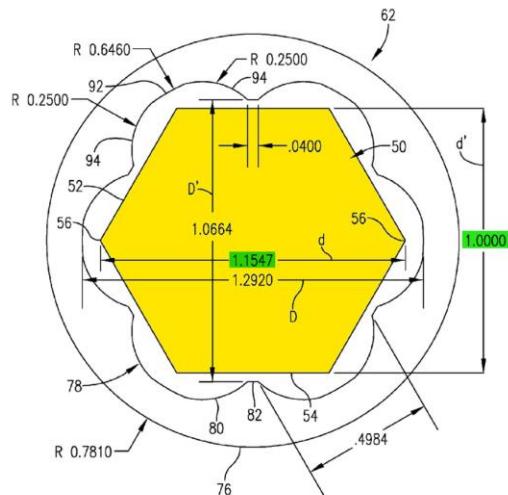


FIG. 14.

Defendants contend that a POSITA would either not understand the term “substantially flattened,” or would understand the term to mean perfectly flat. KMI contends that a POSITA would understand that the term “substantially flattened” means “nearly, approximately or almost flattened,” and thus no construction other than “plain and ordinary meaning” is necessary. Here

again, the plain language of the claims and the patent’s specification provides clear support for one party’s position, this time KMI.

Claim 1 states that the socket apices are “substantially flattened,” rather than perfectly “flat.” (‘134 Patent at Claim 1). The specification similarly describes the apex surfaces as “substantially flattened” or “flattened”, rather than perfectly flat. (*Id.* at 2:28–31, 4:21–25, 4:50–52, 5:5–8). *See, e.g., Circle R, Inc. v. Trail King Indus., Inc.*, 21 Fed. Appx. 894, 898 (Fed. Cir. 2001) (holding the “district court erred when it concluded that the specification required the phrase ‘substantially flat’ be construed to mean ‘entirely flat’ where the ordinary meaning of “substantially” allowed for slight deviations); *Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc.*, 347 F.3d 1314, 1323 (Fed. Cir. 2003) (observing that the case law recognizes that a common, ordinary meaning of substantially includes meaning an approximation); *York Products, Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996) (affirming district court construction of the phrase “[s]ubstantially the entire height thereof” as requiring nearly or almost the entire height thereof).

In response, Defendants argue that the term of degree “substantially flattened”—which describes the small apex surface on the interior of the socket—is indefinite. Doc No. 50 at 18–20. However, “substantially” is a descriptive term commonly used in patent litigation. *See, e.g., Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001). Further, other courts have held that terms that the Court finds to be similar to “substantially flattened” are not indefinite. *See, e.g., Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1359 (Fed. Cir. 2012) (finding “substantially planar” sufficiently definite); *Immersion Corp. v. Motorola Mobility LLC*, 2018 U.S. Dist. LEXIS 183117, *17–19 (D. Del. Oct. 25, 2018) (finding “approximately planar” sufficiently definite); *Edgewell Personal Care Brands, LLC v. Albaad Massuot Yitzhak, Ltd.*,

2017 U.S. Dist. LEXIS 70242, at *2, 4 (D. Del. May 9, 2017) (finding “generally tapered” sufficiently definite).

Indeed, Defendants’ proposed alternative construction, construing “substantially flattened” as “flat,” would in effect require the Court to violate a fundamental canon of claim construction by reading the word “substantially” out of the claims. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010) (“[c]laims must be ‘interpreted with an eye toward giving effect to all terms in the claim’” and avoiding “a claim construction which would render a claim limitation meaningless.”) (citations omitted); *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 951 (Fed. Cir. 2006) (a patent claim construction that reads limitations out of a claim is “contrary to the principle that claim language should not [be] treated as meaningless”); *see also Cohesive Tech., Inc. v. Waters Corp.*, 543 F.3d 1351, 1368 (Fed. Cir. 2008) (rejecting district court’s narrow claim construction because it effectively read the term “about” out of the claim).

The Court declines to read “substantially” out of the claim and finds that “substantially flattened” would be understood by a POSITA in light of the claims and specifications of the ‘134 Patent to have its plain and ordinary meaning of substantially but not necessarily completely flat. *See Larada Scis., Inc. v. Pediatric Hair Sols. Corp.*, No. 318CV00320KDBDSC, 2019 WL 4024956 (W.D.N.C. Aug. 26, 2019) (holding that “substantially” be given its “plain and ordinary” meaning in construing patent claim asserted to be indefinite).

TERMS 4 and 5: “at least about” (Claims 1, 4 & 6) and “being from about” (Claims 2, 3, 5 & 7)

The term “**at least about**” is found in Claims 1, 4 and 6 of the ‘134 Patent:

- “the distance D between the centers of opposed concave surfaces being **at least about** 0.1 inches longer than the distance d between opposed apices of said lug nut” (claim 1)

- “the distance D' between opposed apex surfaces being **at least about** 0.04 inches greater than the distance d' between opposed wrench flat surfaces.” (claim 1)
- “each of said flattened apices having a width of **at least about** 0.02 inches.” (claim 4)
- “the distance between each adjacent pair of flattened apices being **at least about** 0.4 inches.” (claim 6)

The term “**being from about**” is found in Claims 2, 3, 5 and 7 of the ‘134 Patent:

- “the distance D **being from about** 0.12-0.15 inches longer than the distance d.” (claim 2)
- “the distance D' **being from about** 0.05-0.07 inches greater than the distance d'.” (claim 3)
- “said widths **being from about** 0.03-0.05 inches.” (claim 5)
- “the distance between each adjacent pair of flattened apices **being from about** 0.45-0.5 inches.” (claim 7)

KMI’s PROPOSED CONSTRUCTION – Plain and ordinary meaning of all terms / or adding “+/- a manufacturing tolerance of +/- 0.005” (for example, “having a width of at least 0.02 inches +/- a manufacturing tolerance of +/- 0.005”)

DEFENDANTS’ PROPOSED CONSTRUCTION – All Terms are Indefinite / or “greater than or equal to” and “between” (for example, “having a width of greater than or equal to 0.02 inches” and “the distance between 0.12 - 0.15 inches longer”)

While each party has suggested an alternative construction, the fundamental disagreement among the parties concerning the construction of these claims is whether “about” should be given its ordinary meaning of “approximately” or does the patent’s use of the term “about” in setting the claimed distances and dimensions make the patent “indefinite.” KMI’s position is that the words used are acceptable terms of degree that would be understandable to a POSITA in the context of the invention and the inherently imprecise nature of small manufacturing variances. KMI contends that, “the term ‘about’ . . . is a descriptive term commonly used in patent claims to ‘avoid a strict numerical boundary to the specified parameter.’” See, e.g., *Ecolab, Inc. v. Envirochem, Inc.*, 264

F.3d 1358, 1367 (Fed. Cir. 2001) (quoting *Pall Corp. v. Micron Seps.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995)). Therefore, according to KMI, there is no need for the Court to construe the claim terms beyond holding that the words have their “plain and ordinary” meaning.

In response, Defendants argue that while terms of degree may be used in patent claims where there is an objective basis in the intrinsic record to allow a POSITA to know the boundaries of the patent claims, in this case there is no information either in the specifications or the prosecution history from which a POSITA would be able to know the bounds of the ‘134 Patent with reasonable certainty. Therefore, they ask the Court to conclude that the terms are indefinite.

A patent must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as [the] invention.” 35 U.S.C. § 112 ¶ 2 (2006). *See* 35 U.S.C. § 112. A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). Defendants carry the burden of showing invalidity due to indefiniteness. *See Apple Inc. v. Samsung Electronics Co.*, 786 F.3d 983, 1003 (Fed. Cir. 2015). A patent is presumed valid under 35 U.S.C. § 282 and, “consistent with that principle, a [fact finder is] instructed to evaluate … whether an invalidity defense has been proved by clear and convincing evidence.” *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91 (2011).

In *Nautilus*, the Supreme Court observed that § 112, ¶ 2 requires “a delicate balance.” *Nautilus*, 572 U.S. at 909 (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002)). On one hand, the court noted, the definiteness requirement must consider the inherent limitations of language. “Some modicum of uncertainty,” the court recognized, is the “price of ensuring the appropriate incentives for innovation.” *Id.* (quoting *Festo Corp.*, 535 U.S.

at 741). On the other hand, the court explained, a patent must be precise enough to afford clear notice of what is claimed, thereby “appris[ing] the public of what is still open to them. Otherwise there would be a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.” *Id.* at 909-910 (internal quotation marks and citations omitted). The court further explained another policy rationale: “absent a meaningful definiteness check … patent applicants face powerful incentives to inject ambiguity into their claims.” *Id.*

Balancing these competing interests, the Supreme Court held that “[t]o determine the proper office of the definiteness command, … we read § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Id.* The standard adopted by the Supreme Court “mandates clarity, while recognizing that absolute precision is unattainable.” *Id.* It also accords with opinions of the Supreme Court stating that “the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” *Id.* (quoting *Minerals Separation, Ltd. v. Hyde*, 242 U.S. 261, 270 (1916)).

Defendants contend that the challenged claims are neither particular nor distinct because the claims include an inherent term of degree – “about” – that makes it impossible for a POSITA to determine the scope of the patent with reasonable certainty. More specifically, Defendants argue that neither the claims nor the more detailed specifications provide an approximation, standard, or method for measuring the degree of “about” for the distances and dimensions at issue.

Terms of degree often pose definiteness concerns because they are inherently vague and, while these terms have common meaning, they arguably require a more technical meaning within the context of the patent. However, “[t]here is no blanket prohibition on terms of degree.” See *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1374 (Fed. Cir. 2014); *Biosig*

Instruments, Inc. v. Nautilus, Inc., 783 F.3d 1374, 1378 (Fed.Cir.2015) (“We do not understand the Supreme Court to have implied in [Nautilus], and we do not hold today, that terms of degree are inherently indefinite”). “Claim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention.” *Id.* (quotations omitted). In addition, “[t]he degree of precision necessary for adequate claims is a function of the nature of the subject matter.” *Id.* at 1382. Thus, in determining whether a term of degree makes a claim term indefinite (thus invalidating the patent as to that claim term and all the other claims that depend on it), “the court must determine whether the patent provides some standard for measuring that degree” to provide enough certainty to a POSITA as to the scope of the claim. *See Biosig Instruments*, 783 F.3d at 1378.

Defendants argue that “nothing in the specification or file histories of the ‘134 Patent provides any indication of how “about” should be interpreted in this context, in particular because the patent nor the prosecution history does not give any dimensions for the prior art against which the present invention is compared. Thus, they argue, a POSITA would have no way of knowing how much “clearance” is being claimed by the patent relative to the prior art and cannot reasonably determine the scope of the ‘134 Patent.¹

In response, KMI argues that it would be improper to rewrite the claims to omit the word “about” because claims should be “interpreted with an eye toward giving effect to all terms in the claim,” *see Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). Also, KMI asserts that the term “about” commonly appears in patent claims and district courts typically construe

¹ This argument, of course, ignores the fact that a POSITA would, by definition, necessarily be familiar with the prior art and thus have some information from which to make a relative comparison.

“about” to have its plain and ordinary meaning, find construction unnecessary, or construe it to mean “approximately.”

The Court finds persuasive the analysis of *TransWeb, LLC v. 3M Innovative Props. Co.*, Civil Action No. 10-4413 (GEB), 2011 U.S. Dist. LEXIS 132153, at *20-24 (D.N.J. Nov. 16, 2011) and *Viva Healthcare Packaging (USA) Inc. v. CTL Packaging USA, Inc.*, No. 3:13-CV-00569-MOC, 2015 WL 1346091, at *5–7 (W.D.N.C. Mar. 24, 2015) in which the court construed the patent terms in dispute while deferring a decision on the defendant’s indefiniteness defense until later in the case. In *TransWeb*, the Court construed the same term “at least about” at issue here as “approximately” but preserved the issue of indefiniteness for dispositive motions. The Court reasoned, in part:

3. At least about

3M contends that the term is straightforward and that it does not need construction...Alternatively, 3M argues that it means "at least approximately," and that "'approximately' means within the range of experimental error a person of skill in the art would expect when he/she uses the test methodology described in the Patent." ... TransWeb argues that this claim term is indefinite and offers no construction.

"The word 'about' does not have a universal meaning in patent claims ... the meaning depends on the technological facts of a particular case." *Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs, Ltd.*, 476 F.3d 1321, 1326 (Fed. Cir. 2007). The court in *Amgen, Inc. v. Chugai Pharmaceutical Co.* held that the term "about 160,000 IU/AU" (signifying erythropoietin activity *in vitro*) was indefinite because nothing in the specification, prosecution history, or prior art provided any indication as to what specific range of activity might be covered by the term "about." See 927 F.2d 1200, 1218 (1991). The court noted that no expert testimony was available to facilitate construction of the term and that its "holding that the term 'about' renders indefinite [the claims] should not be understood as ruling out any and all uses of this term in patent claims. It may be acceptable in appropriate fact situations." *Id.*

Generally, courts have been able to construe patent claim terms that use qualifying words. "Such broadening usages as 'about' must be given reasonable scope; they must be viewed by the decisionmaker as they would be understood by persons experienced in the field of the invention." *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1554 (Fed. Cir. 1996) (quoting *Andrew Corp. v. Gabriel Electronics, Inc.*, 847 F.2d 819, 821-22 (Fed. Cir. 1988)). Thus, where intrinsic evidence as to technical meaning or, if intrinsic evidence is unavailable, expert testimony is supplied to assist in determining the meaning of "about," the court will adopt that construction and find the terms definite. See, e.g., *Cohesive*

Techs., Inc. v. Waters Corp., 543 F.3d 1351, 1369 (Fed. Cir. 2008); *BJ Servs. Co. v. Halliburton Energy Servs.*, 338 F.3d 1368, 1372-73 (Fed. Cir. 2003). Where such intrinsic or extrinsic evidence is not available, "about" has been given its plain and ordinary meaning—"approximately." *See, e.g., Merck & Co*, 395 F.3d at 1369-70.

Here, neither party has offered expert testimony, but it is likely that "at least about" is amenable to construction and can be given its ordinary meaning, as it would be understood by a person of ordinary skill in the art. TransWeb argues that because there is no intrinsic evidence or expert testimony as to a specific rate of error (e.g., $\pm .05/\text{mm H}_2\text{O}$ Quality Factor), no person of ordinary skill in the art could understand the metes and bounds of the claims. The intrinsic evidence does not suggest any exact numerical range, but numerous courts have found this acceptable and defined "about" to mean "approximately." *Merck & Co.*, 395 F.3d at 1369-70; *Astrazeneca Pharms. LP v. Handa Pharms., LLC*, 2010 U.S. Dist. LEXIS 126078, 2010 WL 4941431, at *4 (D.N.J. Nov. 30, 2010); [*23] *Teva Pharm. Indus., Ltd v. Dr. Reddy's Labs., Ltd.*, 2008 U.S. Dist. LEXIS 48039, 2008 WL 2557510, at *6 (D.N.J. June 23, 2008).

...

Consequently, for purposes of construing "at least about," the Court finds that a person of ordinary skill would not be left without guidance as to an error range, which the specification allows to be "interpreted in its technologic and stylistic context." *Pall Corp. v. Micron Separations*, 66 F.3d 1211, 1217 (Fed. Cir. 1995). **Preserving the issue of indefiniteness or lack of written description under 35 U.S.C. 112 for dispositive motions, the Court concludes that "at least about" means "at least approximately."**

TransWeb, 2011 U.S. Dist. LEXIS 132153, at *20-24 (emphasis added). Similarly, in *Viva Healthcare*, the court agreed that it could properly rule on the defendant's indefiniteness defense at claim construction but deferred doing because of its desire to rule on the issue based on a more developed record:

Viva argues that the court must postpone any inquiry on indefiniteness, enablement, and other issues relating to invalidity until all fact and expert discovery proceedings have been completed. ... [R]elevant case law indicates that the court can, in fact, address the matter of indefiniteness at the claim construction phase and find a patent invalid if the party asserting invalidity meets its clear and convincing burden.

...

... [T]he Federal Circuit has stated numerous times that a district court's inquiry on indefiniteness is appropriate at the claim construction stage. *See, e.g., Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008) ("Indefiniteness is a matter of claim construction, and the same principles that generally govern claim construction are applicable to determining whether

allegedly indefinite claim language is subject to construction.”); *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1331 (Fed. Cir. 2009) (“Indefiniteness under 35 U.S.C. § 112 ¶ 2 is an issue of claim construction and a question of law.”); *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1379 (Fed. Cir. 1999) (“analysis under § 112, ¶ 2 is inextricably intertwined with claim construction.”). The court notes that several other post-*Nautilus* district courts have decided the issue of indefiniteness at claim construction. See, e.g., *California Inst. of Tech. v. Hughes Commc'n Inc.*, 2014 WL 3866129 (C.D. Cal. Aug. 6, 2014); *Prolifiq Software Inc. v. Veeva Sys. Inc.*, 2014 WL 3870016 (N.D. Cal. Aug. 6, 2014); *Thomas Swan & Co. v. Finisar Corp.*, 2014 WL 2885296 (E.D. Tex. June 25, 2014); *Largan Precision Co., Ltd v. Genius Elec. Optical Co.*, 2014 WL 5358426 (N.D. Cal. Oct. 20, 2014) (all post-*Nautilus* district court decisions examining and determining indefiniteness at the claim construction phase). Moreover, the Federal Circuit recently affirmed a district court’s finding at claim construction (post-*Nautilus*) that a patent’s claims were indefinite. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1368–69 (Fed. Cir. 2014).

With those parameters in mind, the court has considered all of CTL’s invalidity arguments and thoroughly assessed the evidence of record relevant to the invalidity contentions. After careful contemplation, the court declines to rule on the issues of indefiniteness and enablement at this time. The court finds that the record, as it currently stands, does not show clear and convincing evidence of invalidity. Further developments in the record as this case proceeds will assist the court in reaching a conclusion on those issues. Moreover, the court is mindful of the fact that the record on the issue of invalidity should be as complete as possible so that if and when this case reaches the Federal Circuit, all of the appropriate facts and evidence will be before the appellate court for review.

However, in light of the fact that these patents do indeed claim broadly, and that CTL’s expert witnesses testified that they were unable to ascertain the scope of the patents with reasonable certainty, the court is troubled by the question of how members of the public are able to determine whether they are infringing upon these patents. While the court requires more evidence before making a final decision on invalidity, it is cognizant of the “powerful incentives” for patent applicants to “inject ambiguity into their claims,” *Nautilus, Inc. v. Boisig Instruments, Inc.*, — U.S. —, 134 S.Ct. 2120, 2129 (2014), and will continue to consider what, if anything, these patents have left open to the public. **Accordingly, the court will proceed with an analysis of the parties’ claim construction arguments only and will revisit the issue of indefiniteness once the record has been more fully developed.**

Viva Healthcare, 2015 WL 1346091, at *5–7 (emphasis added).

As in *Viva Healthcare*, the Court finds that Defendants have not, based on the present record at this relatively early stage of the case, produced clear and convincing evidence that the

‘134 Patent is indefinite.² The evidence before the Court are two competing expert affidavits, one asserting that a POSITA would understand that “about” in the context of the patent refers to manufacturing tolerances and the other saying a POSITA would not know how to measure “about” in applying the patent. Further, the parties each belittle each other’s affidavit, with the Plaintiff questioning whether Defendants’ expert has enough practical experience and the Defendants saying that the Court should ignore the Plaintiff’s affidavit because it comes from the inventor, who is biased. Indeed, both criticisms may have some validity, which suggests to the Court that rather than decide the question on a thin and uncertain record it should await additional discovery and evidence that may be helpful to the Court in reaching a final decision on indefiniteness. Therefore, the Court will defer ruling on the issue of indefiniteness under 35 U.S.C. 112 until the record has been more fully developed at dispositive motions or trial and will construe the disputed claims so that the litigation may continue.

Accordingly, with respect to the construction of the term "at least about," the Court concludes that it should be construed as "at least approximately" in accordance with its ordinary meaning, *see TransWeb, supra* (and cases cited therein), and that "being from about" should similarly be construed as "being from approximately."

In so holding, the Court notes that it finds both parties’ proposed alternate constructions unconvincing. KMI suggests that if the Court does not adopt a construction based on the ordinary meaning of the terms then the Court should incorporate a specific manufacturing tolerance of +/- .005 into the construction of the claim terms. In turn, in the absence of a finding of indefiniteness, Defendants ask the Court to alternatively construe the term “at least about” as “greater than or equal to,” in effect foreclosing from inclusion in the patent claims any distance or dimension less than the stated amount (thus having the effect of setting a specific minimum distance between the

² The Court notes, however, that as in *Viva Healthcare* it has a concern based on the present record that the patent may not give the public sufficient notice of what is permitted outside the patent claims.

socket and the lug nut) and ask the Court to construe the term “being from about” as “between,” which sets hard boundaries at both ends of the stated ranges.

With respect to KMI’s alternative construction, the Court cannot find based on the current record that a POSITA would understand the terms to include the specific manufacturing tolerance of +/- .005. While it may ultimately be true that a POSITA would understand that the dimensions in the patent are subject to acceptable manufacturing tolerances and that the NASCAR standard might be a place to look for such tolerances, the fact that such standards might change and that manufacturing tolerances might be different for different dimensions and different manufacturers suggest that reading a *specific* manufacturing tolerance into the claims is not warranted.³

Defendants’ alternate construction of “at least about” and “being from about” as “greater than or equal to” and “between” fares no better, primarily because it does not give meaning to the term “about.” The claims allowed in the ‘134 Patent specifically give the patent a (slightly) broader scope than the hard boundary dimensions which would result from Defendants’ alternate construction. Thus, it would be improper to adopt that construction.⁴

In summary, the Court finds that Defendants have not established based on the present record that the claim terms “at least about” or “being from about” are indefinite by clear and convincing evidence. However, the Court will revisit that finding once the record has been further developed. With respect to construction of the claims, the terms “at least about” and

³ Also, the fact that the dimensions in the patent drawings are shown to 4 decimal places (0.0000) and both of the parties use different manufacturing tolerances for their competing lug nut socket products suggest that the specific manufacturing tolerance of +/- .005 may not always be applicable.

⁴ The Court similarly disagrees with Defendants’ argument that a construction that permits the dimensions to fall below the statement number (i.e., slightly less than .1 inches) vitiates the term “at least.” For example, saying that “a hearing will last at least about an hour” means that the hearing might last slightly less than an hour or longer than an hour. Therefore, giving meaning to the possibility that the lower bound of the dimension might be slightly less than the exact number does not remove meaning from the term “at least” in these circumstances.

“being from about” are construed as “at least approximately” and “being from approximately” respectively.

SO ORDERED ADJUDGED AND DECREED.

Signed: July 23, 2020


Kenneth D. Bell
United States District Judge